

LABORATORY

OF THE

INLAND REVENUE DEPARTMENT

OTTAWA, CANADA

BULLETIN No. 221.

ARSENIC AS AN IMPURITY IN DRUGS

(EFFERVESCENT PHOSPHATE OF SODA)



1. ABORATORY

OF THE

OTTAWA, CANADA.

BULLETIN No. 221.

ARSENIC AS AN IMPURITY IN DRUGS

(EFFERVESCENT PHOSPHATE OF SODA).

OTTAWA, December 10, 1910.

W. J. GERALD, Esq., Deputy Minister of Inland Revenue.

SIR,—Since the historic case of Arsenical beer (Manchester, Eng., 1900), where it was found that the malt used had become contaminated with dangerous amounts of arsenic through having been dried in the fumes from pyritous coal; while glucose used as an adjunct in beer manufacture contained arsenic from sulphuric acid, used in hydrolysis of starch,—many investigations of drugs have been made, specially directed towards determinations of their content of arsenic.

There is no question of intentional adulteration in this matter, but arsenic is so widely distributed in nature, and especially so in the materials employed in the manufacture of sulphuric acid—which latter is, in its turn, a principal agent in many chemical manufactures that, unless special precautions are taken, more than negligible traces of arsenic may occur in very many drugs.

Bulletin 181 of this Department, contains the results of work upon 448 samples (Sulphates of magnesia and soda, and phosphate of soda) examined in June, 1909—Below is a synopsis of results:—

			ARBENIC.		
	None.	Less than one-half milligram per hundred grams.	Less than one milli- gram per hundred grams.	More than one milli- gram per hundred grams.	Total. Samples
Sulphate of magnesia	120	26	4	0	150
Sulphate of soda	99	35	10	6	186
Phosphate of soda	117	25	6	0	146
	336	86	20	6	448

Bulletin 202 (March, 1910) reports upon 151 samples of Borax; of which

13	ample	contained	1.0	milligram	per	100	grammes
7	44	66	0.5	48	6.1		44
3	64	44	0.4	60	61	•	61
1	64	66	0.3	44	6	i	44
A	4.6	66	0.2	61	61		44

The accompanying report deals with an examination of 134 samples of effervescing phosphate of soda, purchased throughout Canada. Of this number, 131 samples (98 per cent of the collection) have been found entirely free from arsenic, or containing quite negligible traces. Of three samples which gave distinct reaction for arsenic, one sample contained one part in 100,000, and two samples, contained half of this amount.

The smallest medicinal dose of arsenic fixed by the British Pharmacopeia is $\frac{1}{10}$ of a grain; (0.001 gramme). This amount is contained in 100 grammes (about 3 ounces) of the sample 36492. Of this drug $\frac{1}{10}$ to unce is the usual dose.

I beg to recommend publication of this report as Bulletin 221.

I have the honour to be, sir, Your obedient servant,

> A. McGILL. Chief Analyst.

BULLETIN No. 221.—EFFERVESCENT PHOSPHATE JF SODA.

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Inspector's Report. (Is not an ex- pression	of opinion).
of Manufacturer inher, he Vendor.	Purnisher.
Name and Address of Manufacture or Furnisher, as given by the Vendor.	Manufacturer.
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Name and Address of Vendor.	
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Nature of Sample.	

DISTRICT OF NOVA SCOTIA-R. J. WAUGH, INSPECTOR.

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:	4216	42161 C. E. Huggina, Halifax, N.S		N	25 H. K. Wampole Co., Manufacturers Porth, Ont.		Labelled Moyes'	ı
*	4216	42162 J. St. Clair Combes, Halifax,	:	81	Moyes Chemical Co., "		Phosphateof Soda	
	42163	42163 Irwin & Sons, Halifax, N.S.	:	88	35 H. K. Wampole, Perth. Nat. Drug & Chem. Co.	Chem. Co.		
:	42164	42164 M. D. Logan, Halifax, N.S	ı	83	Ont. Nat. Drug & Chem. Co., Manufacturers	-		
4	42168	42165 Brown Bros. & Co., Halifax, N.S.	:	8	Halifax. H. K. Wampole, Perth.			
:	42106	42166 John Rawley, Halifar, N.S	3	Ħ	Omt			
:	42167	42167 C. A. Barnstead, Halifax, N.S	2	8	Jno, Wyeth & Bro., Phil. Lymans Ltd	I. Montreal		
1	42168	42168 G. C. McDougall, Kentville, N.S.	1	N	25 Nat. Drug & Chem. Co., Manufacturers.	y, Montreal.		1 1
:	42160	12169 H. C. Wilson, Windsor, N.S	:	88	Halifax. H. K. Wampole, Perth.			

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BULLETIN No. 221. EFFERVENCENT PHOSPHATE OF SODA. Continued.

Results	Analysis	Arsenic per 100 grams.
	Report.	pression of opinion.)
, and the second	isher te Vender.	Furnisher.
	Ange and Address of Manufacture or Furnisher as given by the Vendor.	Manufacturer.
Cost.		Quantity.
	Name and Address of Vendor.	
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DISTRICT OF PTINGE EDWARD ISLAND-THEO, MOORE, INSPECTOR.

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Hosphate 45881 E. A. Foster, Charlottetown Ib. 20 Toronto Pharmacy Co.,	45882 Geo, E. Hughes, Charlottetown - 20			45835 J. G. Jamiecon, Charlottetown = 20	45686 Johnson & Johnson, Charlotte		45988 McFadyen & McLellan, Summer. 4 lb. 20	46839 McNeill Drug Co., Summerside., 1 bot. 25	
NEff. Phosphate 45831 E. A. Foster, Charlottetown 1 lb. 20	45982 Geo. E. Hughes, Charlottetown - 20			10	2			24 46639 McNeill Drug Co., Summerside 1 bot. 25	

DISTRICT OF NEW BRUNSWICK-J. C. FERGUSON, INSPECTOR.

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4500 Nat. Drug & Chemical Co., St. 3 hote John, N.R. N.R. Hawker & Son, St. John of Ib. N.R.	4	2	bot.	90	2	d.	.700	
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458F	\$5.06	4362 Burpee E. Bruvn, St. John, N.B.	4596	45364 R. T. Mack, Fredericton, N.B., 4 oz.	46365 D. W. C. Stevens, Woodstock, 4	45366 Leger Drug Co., Moneton, N.E. 1b.	15.967	45368 A. F. Shaw, Newcastle, N.B.
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BULLETIN No. 221.—EFFERVESCENT PHOSPHATE OF SODA.

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Inspector s Report. (Is not an ex- pression of	opinion.)
of Manufacturer iisher he Vendor.	Furnisher.
Name and Address of Manufacturer or Furnisher as given by the Vendor.	Manufacturer.
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Name and Address of Vendor.	
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DISTRICT OF QUEBEC-E. BELAND, INSPECTOR.

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				36491 Juseph Masson, 809 rne St. Valier, 1 lb. Quebec. 36492 A. Martineau, 732 rue St. Valier, 2 36493 W. Burnet et Cie, 139 rne St. 4 36494 Joseph, Quebec 36496 36497 Eatate Cieo. P. Plantondon, 122 4 36496 rue St. Joseph, Quebec. 36499 Joseph, Quebec	36491 Juseph Masson, 809 rne St. Valier, 1 lb. Quebec. 36492 A. Martineau, 732 rue St. Valier, 2 36493 W. Brunet et Cie, 139 rne St. 4 36494 Joseph, Quebec 36497 Eatate Cieo. P. Planondon, 122 4 36497 Fatate Cieo. P. Planondon, 122 4 36499 Joseph, Quebec 36499 Joseph, Quebec 36499 Joseph, Quebec 36499 Joseph, Quebec	40 Chas. E. Frosst & Co.,		**	John Wyeth & Br	Parke Davis & C	K. Wampole & Co.	Parke Davis & Co.		Wyeth Bros., Philadel-	35 H. K. Wampole & Co
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DISTRICT OF ST. HYACINTHE-J. J. COSTIGAN, ACTING-INSPECTOR.

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DISTRICT OF MONTREAL—J. J. COSTIGAN, INSPECTOR.

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hate 40748 Quenneville & Guerin, 2,002 St. 1 bot. 35	40749 J. E. Begron, M.D., 384 Clark 2 50 Parke Davis & Co	40750 F. E. Morgan, 181 Fairmount, 1 25	40751 Jno. J. Weinfield, 458 St. Law. 4 lb. 25	40758 F. F. Moren, 48 St. Law. 1 bot. 25.	66754 Romeo Casgrain, 440 St. Catherine 1 For. 30 June Wresh & De.	40706 J. H. Nault, 42 St. Catherine E., ‡ lb. 26 Parke Davie & Co.	40736 X. Bourgue, 20 St. Catherine W., 1 bot., 25 Nat. Drug & Chem. Co.	40797 Nat. Pat. Medicine Co., 294 St. 1 25
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BULLETIN NO. 221. -- EFFERVESCENT PHOSPHATE OF SODA.

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DISTRICT OF OTTAWA-J. A. RICKEY, INSPECTOR.

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DISTRICA OF KINGSTON-JAS. HOGAN, INSPECTOR.

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DISTRICT OF TORONTO-H. J. DAGER, INSPECTOR.

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BULLETIN No. 221-EFFERVESCENT PHOSPHATE OF SODA.

Results of Analysis). 100 grams
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DISTRICT OF LONDON-T. KIDD, INSPECTOR.

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DISTRICT OF WINDSOR-JOHN TALBOT, INSPECTOR.

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	F. A. Lemon & Co., St. Thomss. 6	W. W. Taylor, St. Thomas	R. E. Crane, St. Thomas	:	:	W. A. McCollom, Tilsonburg	W. S. McDonald, Tibonburg	J. S. Pepper, Woodstock	
	42443 F. A. Lemon & Ca., St. Thomas 6	42447 W. W. Taylor, St. Thomas	42458 R. E. Crane, St. Thomas	:	:	42470 W. A. McCollom, Tilsonburg	42475 W. S. McDonald, Tilsonburg	12484 J. S. Pepper, Woodstock	The same designation to the same of the sa
	teof 42443 F. A. Lemon & Ca., St. Thomas. 6 oz. 25	42447 W. W. Taylor, St. Thomas	42468 R. E. Crane, St. Thomas	42459 J. E. Richards & Co., Aylmer	42467 Em. A. Campbell, Aylmer 6	42470 W. A. McCollom, Tilsonburg	42475 W. S. McDonald, Tilsonburg	42484 J. S. Pepper, Woodstock	Metabolic and Annual Security and Annual Secur
	hosphate of 42443 F. A. Lemon & Ca., St. Thomas 6	" 42447 W. W. Taylor, St. Thomas	42468 R. E. Crane, St. Thomas	:	:	" 42470 W. A. McCollom, Tilsonburg	" 42475 W. S. McDonald, Tilsonburg	" 42464 J. S. Pepper, Woodstock	And the state of t
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DISTRICT OF CALGARY—R. W. FLETCHER, INSPECTOR.

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d	2	:	43975	Calgary.			3 5	Calgary.	=
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	=	:	43979	43979 H. I. Higgs, Wetaskiwin.	::	:	25		2
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		:	43981	43961 E. M. Carpenter, Edmonton		=	3	50 J. Worth & Br. Phila.	
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BULLETIN No. 221—EFFERVESCENT PHOSPHATE OF SODA.

Results of Analysis.	Arsenie 160 Crams
Inspector's Report. (Is not an ex-	opinion.)
of Manufacturer hisber he Vendor.	Furnisher.
Name and Address of Manufacturer or Furnisher as given by the Vendor.	Manufacturer.
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Name and Address of Vendor.	
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DISTRICT OF VANCOUVER-J. F. POWER, INSPECTOR.

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DISTRICT OF VICTORIA- ... OSULLIVAN, INSPECTOR.

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